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A Social Network Perspective on Sport Management: The Effect of Network Embeddedness on the Commercial Performance of Sport Organizations

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The sports sector is generally regarded as a field in which interorganizational relationships have a large effect on the performance of those organizations (Berrett & Slack, 1999; Daellenbach, Davies, & Ashill, 2006; McCarville & Copeland, 1994). Be it relations with agents, governments, spectators or sponsors, organizations within the field of sport management are increasingly dependent on their ability to build and maintain a strong social network (Thibault & Harvey, 1997). Surprisingly, social network theory and methods have largely been neglected within the field of sport management (Daellenbach et al., 2006; Quatman & Chelladurai, 2008). Within this study we explore the potential of social network theory and methods by conducting an empirical investigation of the effect of sport organizations' network characteristics on its commercial performance. We focus on ego-network characteristics as these can be directly influenced by sport organizations and their managers (Ahuja, 2000).

For many sport organizations, the relationship with sponsors is the main source of commercial performance and key to the survival and growth of those organizations. While there is a growing body of literature investigating corporate sponsorship from the perspective of the sponsor, relatively little is known about how sport organizations are positioning themselves, in terms of the amount and quality of relations they maintain, in their efforts to attract sponsors (Berrett & Slack, 2001). Social network theory might be one of the missing links to better understand these issues. For example, sport organizations that

are better able to start and maintain relationships and to contact their sponsors more often and for a longer period of time might perform better than those that are less able to deal with their relationships in a sustained way. Social network theory has been used in numerous studies, and many reviews and essays have provided an excellent overview of the causes and consequences of interorganizational relationships (e.g., Borgatti & Foster, 2003; Gulati, 1998). Despite the overwhelming empirical evidence that interorganizational relationships affect performance in industries such as biotechnology (Powell, Koput, & Smith-Doerr, 1996) and apparel (Uzzi, 1996) no study has tested the effect of interorganizational relationships on performance within the field of sport management.

Sport organizations are highly dependent on external sources for financial resources and have a clear motivation to establish effective relationships with providers of these financial resources. This environment is highly uncertain as current sponsors might find alternative ways to spend their sponsorship money and new potential sponsors have a wide range of options to invest in. Oliver (1990) argues that in environments such as these, organizations form organizational relationships as an adaptive response to environmental uncertainty. Organizational relations enable the development of mutual trust, providing organizations with the ability to overcome this uncertainty (Granovetter, 1985; Williamson, 1981). Berrett and Slack (1999, p. 130) argue that "in the sponsorship arena, the development of trust is possibly more important than in other exchange between corporations because it often takes a number of years to create a viable sponsorship property". As such, the sport context is a highly relevant one to apply a social network perspective.

We specifically focus on the question: To what extent do the amount of sponsor relations and the characteristics of those relations influence the amount of sponsor

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funds attracted by sport organizations? We first present a theoretical discussion regarding the relations between the networks of sport organizations and their commercial performance is presented. From this discussion we derive three hypotheses. Subsequently, the measurements, data and methodology are discussed. Based on the results of these analyses the validity of the theoretical ideas we put forward will be discussed and, finally, the implications for network research and sport management research will be explored.

Theory and Hypotheses

Sport Sponsorship

Sport sponsorship is an agreement in which one party, the sponsor, provides money or a performance based on money, while the other party, the sponsored party, provides commercial communication opportunities and/or other business related exchange (Verhaert & Verhaert, 1993). An important element of sport sponsorship lies in the element of providing money or a performance based on money. This implies that for any sponsor relation, the monetary value of the attracted funds can be established (Asjes, 2003). By summing this monetary value over all sponsor relations the total amount of attracted sponsorship money can be determined. To study the concept sport sponsorship effectively, the reciprocal part of the relation is of importance too. This means that sport sponsorship entails financial support and support in any kind, but only when in exchange for advertising activities. This ensures that subsidies, contributions, donations and entrance- and canteen revenues of soccer associations in particular, are excluded.

Network Embeddedness

While sport sponsorship can be considered as a relation driven phenomenon (Berrett & Slack, 1999; Daellenbach et al., 2006; McCarville & Copeland, 1994), we know relatively little about to what extent the (characteristics of the) relations of a sport club influence the amount of sponsor funds attracted. There is, however, a rich literature on the network embeddedness of organizations from which we can draw. An organization's level of network embeddedness is determined both by the quantity of its relationships and by the characteristics of its relationships (e.g., whether these relationships are strong or weak; Granovetter, 1985). More recently, another aspect of the organizational networks was added to this definition, namely the extent to which the organization is geographically proximate to its relations (Hess, 2004).

Before linking each of these three aspects of network embeddedness to the commercial performance of sport organizations two important caveats need to be established. First, the concept of embeddedness is used to describe individual relations as well as organizations as a whole. The first use of the concept pertains to the overlap and nesting of social and economic aspects of a

particular tie (Uzzi, 1997), whereas the second use of the concept reflects the structure and characteristics of all the ties maintained by an organization (Hess, 2004). We are using embeddedness in the latter way in the remainder of this paper. Second, the arguments used in the embeddedness literature are similar to those used in the social capital literature (Nahapiet & Ghoshal, 1998). However, the social capital perspective is primarily used to study ties between individuals (albeit often in organizations), whereas the embeddedness literature is more often used to study ties between organizations. Given that our study has a clear interorganizational focus and does not focus on the actions of individuals within sport organizations, we positioned our paper in the embeddedness literature rather than the social capital literature.

Quantity of Ties. An organization with many ties can influence the behavior of other organizations and access external resources more easily (Ahuja, 2000a; Love & Roper, 2001). Such organizations increase their visibility and perceived status which provides them with opportunities to partner with more central organizations (Gulati, 1999). Another benefit of having many ties is an information advantage, as such organizations are positioned in-between various flows of knowledge. This enables them to tap into the knowledge of a wide range of contacts and to make a good assessment of the quality of the potential of these relationships. Empirical findings are very conclusive about the effects of the quantity of ties an organization maintains as multiple studies in various industries reported a positive relationship between the number of ties maintained and organizational performance (Ahuja, 2000; Baum, Calabrese, & Silverman, 2000; Hagedoorn & Schakenraad, 1994; Stuart, 2000). In contrast with these positive effects, maintaining lots of interorganizational relations might also have disadvantages as there is a limit to the number of relations that an organization can manage effectively (Oerlemans & Knoben, 2010). For example, sports organizations might neglect some of their (key) commercial relations which could impede the amount of sport sponsorship because of departing sponsors. Nevertheless, it is expected that, in general, the positive effects are believed to have the upper hand.

Hence, it is believed that the number of interorganizational relations that a sport organization maintains positively influences the amount of funds attracted, which leads to the following hypothesis.

Hypothesis 1: The higher the number of ties maintained by a sport organization, the higher its commercial performance.

Tie Strength. Granovetter (1973, p. 1361) defined the strength of a tie as the combination of the amount of time spent, the emotional intensity, the intimacy, and the reciprocal services which characterize the tie. Strong ties facilitate the development of trust as these stable relations provide companies with an indication about the behavior and reliability of each other. Whereas strong

ties are interrelated with the development of mutual trust and fine-grained information exchanges between partners, weak ties are 'bridging ties' that can connect companies with different backgrounds and can function as a crucial bridge between two (groups of) companies (Burt, 1992). Weak ties require less managerial attention and are therefore less costly which could make weak ties a more efficient contributor to organizational performance as strong ties. In other words, strong and weak ties have different qualities and there is an ongoing debate about the influence of strong vs. weak ties on organizational performance (Gilsing & Nooteboom, 2005).

This facet of strong ties is underlined by Granovetter's statements that "individuals with whom one has a continuing relation have an economic motivation to be trustworthy" and "[...] continuing economic relations often become overlaid with social content that carries strong expectations of trust and abstention from opportunism" (Granovetter, 1985, p. 490). For the context of this study, it is believed that sport organizations benefit from strong, cohesive relationships with their sponsors only and not from weak or a combination of strong and weak relations. This is because the following benefits of strong relations are far more beneficial for sport organizations and the attraction of sponsorship: the development of trust, the exchange of fine-grained information, reciprocity, problem solving, conflict management, long-term perspective/interest and mutual gain. Hence, it is believed that strong ties influence the amount of sponsorship positively. Therefore, it is proposed that,

Hypothesis 2: The stronger the ties maintained by a sport organization, the higher its commercial performance.

Geographical Proximity of Ties. Another important characteristic of an organization's network that is described extensively in literature is the level of geographical proximity of an organization's interorganizational relationships (Bell, 2005; Bell & Zaheer, 2007). It is often argued that the larger the spatial distance between organizations, the more difficult it is to arrange face-to-face contacts and build up trust, resulting in less bang for relational buck (Gertler, 2003). Therefore, localized relations are often found to provide more benefits as compared with similar nonlocal relationships (Weterings & Ponds, 2009). Moreover, from an institutional perspective, sponsor organizations that are located in close proximity are historically, socially and emotionally more involved than sponsor organizations that are located relatively far away (Edensor & Millington, 2008; Hansen, 1992), resulting in smoother interorganizational collaboration.

For sport organizations this implies that they are expected to benefit more if their sponsors are located in close geographical proximity, because sponsors that are located nearby have the same common habits, norms and customs and subsequently it is believed that this reduces transaction costs and enhances collaborative,

nonopportunistic, behavior (Hansen, 1992). To underlie this argument, Edensor and Millington (2008, p. 177) state that: "historically, there have been strong ties between football teams and the communities in which they were formed, and clubs have symbolized pride in neighborhood, town or city". Based on the above discussed arguments, it is proposed that:

Hypothesis 3: The more geographically proximate the ties maintained by a sport organization, the higher its commercial performance.

Method

Sample and Procedure

Our hypotheses are tested on a sample of Dutch amateur soccer clubs participating in competition organized by the Dutch FA (KNVB) during season 2008–2009. The Dutch FA is a nonprofit organization with the foundation as its legal form. It is centrally organized, with an overall board governing the foundation, and it consists of two business units, one governing and organizing professional football and one governing and organizing amateur football. Currently, the Dutch FA has over 1 million members, reaching one of the highest football participation rates in Europe (64 members per 1,000 inhabitants). The Dutch FA organizes around 30,000 matches every weekend for 3,800 registered clubs (Briene, Koopman, & Goessen, 2005). Dutch professional football consists of a first and second division, both with 18 participating teams. The first division of the Dutch league has been dominated by three clubs (PSV, Ajax, and Feyenoord) winning 48 out of 57 championships since allowing professional soccer in 1954. Dutch amateur soccer is organized at several levels of performance. Each Dutch amateur soccer organization has a first team that plays in one of the eight so called performance-oriented levels. Next to these performance-oriented levels, each club has several other teams that play at the so-called recreational levels. These teams are the back-bone of the soccer clubs and account for the majority of club-members. However, the majority of funds are attracted and spent on the achievements of the first team.

To study a relatively homogeneous group of soccer clubs, we focused our attention to a subset of clubs playing at the same level as it can be assumed that well performing clubs attract more funds than poor performing clubs. Our population consisted out of soccer clubs located in the Netherlands of which the first team competed at level 7 (or fourth class) of the amateur division during season 2008/2009. The reason for choosing amateur sport and not professional sport as a target group was based on the fact that these sport organizations face more difficulties concerning their resource dependencies than professional clubs. Professional sport organizations can make use of more diverse sources of income, such as merchandize-, television rights- and stock-market revenues as well as income derived from the sales of professional soccer players. Therefore, amateur soccer clubs are to some extent

more dependent on their sponsoring funds. We sampled sport organizations that compete at the same level to reduce performance effects between levels. We selected level 7 (or fourth class) of the amateur division as this division best meets the research requirements of comprising sufficient clubs to conduct quantitative research but also comprising of clubs that are sufficiently organized to build and maintain larger numbers of interorganizational relations. Hence, we expect that the theoretical mechanisms as described are truly observable at this level. As we did not have any information that sponsor funds are skewed over certain regions, we did not restrict our data-collection to geographical considerations.

At this distinct level, there were 725 soccer clubs that fit our selection criteria during season 2008–2009. All club characteristics (e.g., address, telephone number, and e-mail addresses) were obtained from the Dutch FA. Data were collected by means of online questionnaires. To ensure that the questions in the questionnaire were understood as intended, they were pretested with two chairmen of amateur soccer clubs and a board member of the Dutch FA. Based on their feedback, several small modifications to the wording of particular questions were implemented. For 528 clubs the e-mail addresses were publicly available. These clubs were approached by e-mail. After two weeks, we sent the nonrespondents a reminder e-mail. The response rate of this group was 6%.

Clubs for which no e-mail addresses was available were contacted by telephone to obtain their e-mail address. We retrieved the e-mail address of 188 out of 206 clubs in this way. The 188 associations were, consequently, approached by e-mail. After two weeks, we contacted the nonrespondents of this group by telephone to ask if the e-mail had been received and to ask for the state of affairs. The response rate of this group was 40%. The remaining 9 clubs for which no e-mail address could be retrieved were sent questionnaires by mail. Each respondent was mailed a letter with a one-page explanation of the research, the survey and a postage-paid reply envelope. The response rate of this group was 22%.

In total this led to 136 clubs that participated in the study of which 29 surveys had too many missing data to be included in the final analysis. Ultimately, 107 clubs returned a useful questionnaire (a response rate of 15%). Even though this might seem a low response rate, organizational level questionnaire research often yields response rates around or even below 10% (Baruch, 1999). In this

perspective, the response rate of 15% is very acceptable. Nevertheless, the fact that a large group of organizations did not respond raises the question of whether the data might suffer from a response bias (Jordan, Walker, Kent & Inoue, 2011). To test whether this might be the case we compared the responding soccer clubs to the population mean (obtained from the KNVB) with respect to their age, size, and the urbanization of the municipality there are located in. The results of this analysis (see Table 1) indicate that there are no signs of significant differences between the respondents to our survey and the population as a whole. Therefore, we conclude that there is no selection bias and that our data, and hence our results, can be generalized to the population of Dutch amateur soccer clubs at level 7 (fourth class).

Measures

Dependent Variable. Our dependent variable, the amount of attracted sponsoring funds in 2008, measures the financial support received by the soccer clubs, but only when in exchange for advertising activities. The amount of attracted sponsoring funds was measured through a categorical 7-item scale (0–5,000 euro; 5,001–10,000 euro; 10,001–15,000 euro; 15,001–20,000 euro; 20,001–25,000 euro; 25,001–30,000 euro and > 30,001 euro). The cut-off values for each of the categories have been chosen based on a discussion with chairmen of soccer clubs. The reason that the cut-off value for the highest category is 30,000 euro's is that soccer clubs are obligated to pay Value Added Tax when the total amount of sponsoring exceeds € 31,765.

Independent Variables. We decided to measure the quantity of ties with the ego-network construct degree centrality. Specifically, we asked each respondent to report the total number of sponsor relations their club had in the soccer season 2007/2008.

Measuring the characteristics of each sponsor relationship of a typical soccer club is problematic as they commonly maintain several dozen of them at any given point in time. In our data, for example, the average soccer club had more than 60 sponsor relations. Asking respondents about each of these relations would make filling out the questionnaire extremely time consuming and, therefore, inevitably cause huge item-nonresponse problems. Following Knoben and Oerlemans (2008), we therefore

Table 1 Non-Response Analysis

	Respondents	Population	Difference	Significance of difference
Age (mean)	70.08	66.93	3.15	0.153
Size (mean # senior teams)	6.47	6.33	0.14	0.591
Size (mean # junior teams)	14.82	14.96	-0.14	0.895
Level of urbanization	3.65	3.30	-0.35	0.158

asked the respondents to reflect on the tie strength dimensions for the four largest sponsor relationships in terms of money. For our measurement of tie strength we combined the work of Granovetter (1973) and Marsden and Cambell (1984) on interpersonal relationships and adjusted these constructs to constructs that are applicable within the interorganizational context. We constructed measures for the frequency of the club-sponsors relationship; the duration of the club-sponsor relationship and the strength of the club-sponsor relationship.

Frequency of each of the four selected club-sponsors relationship was measured with two items namely: 1) the propensity of business related contacts with the sponsor during season 2007–2008 and 2) the propensity of non-business related contacts with the sponsor during season 2007–2008 (adopted from: Brannick, De Burca, Fynes, & Glynn, 2001). A response scale with seven categories ranging from ‘more than once a month’ to ‘less than once a year’ was applied to both items. While the first item is a good indicator for the amount of time spent on information sharing and relational problem solving, the second item is a good indicator for the social depth of the relationship. The final variable is calculated by taking the average of the two items for each relation and subsequently averaging the resulting variable over the four relations.

The duration of each of the four selected club-sponsor relationships was measured by asking for the number of years the sponsor has been a sponsor of that club. A longer duration of the relationship indicates a better understanding about each other which facilitates the development of relational trust and norms of mutual gain (Uzzi, 1999; Larson, 1992; Powell, 1990). The final variable has been calculated by averaging the duration over the four relations and standardizing the resulting variable.

The strength of each of the four selected club-sponsor relationship was measured with the scale developed by Rindfleisch and Moorman (2001) but adapted to the sport context. This scale consists of four statements that ask respondents to indicate the extent to which they agree or disagree with the statement (on a 7-point likert scale). The specific items read: “We feel we owe the sponsor something in return for the financial support”, “There are strong social relations between our sponsor and our board members”, “The relation with our sponsor is mutually gratifying”, and “We expect to work together with this sponsor in the future”. The scale is internally very consistent (Cronbach’s alpha of 0.795). The final variable was calculated by taking the sum-score of the items for every relation and dividing it by four. Subsequently, the average over the four relations was calculated to arrive at a club-level measurement.

Geographical proximity refers to the distance covered by a relationship between an actor (in this case the amateur soccer club) and its partner (Knoben & Oerlemans, 2006). We adapted Knoben and Oerlemans (2008) measurement of geographical proximity to our specific context and asked clubs to indicate the number

of sponsor that are located within five kilometers of the clubhouse. Again, the threshold of five kilometers has been set after a discussion with chairmen of amateur soccer clubs and the board member of the Dutch FA. Even though five kilometers seems a very short distance, our data reveals that for the average soccer club, almost 70% of its sponsors can be found within this range.

To control for unobserved effects we took into account a range of club and regional variables that potentially influences the link between the club-sponsor relationship and the amount of sponsoring funds. We controlled for 8 club related aspects that might have an effect on the amount of sponsoring funds that are acquired by the soccer club in the year of study. These concepts relate to the *age* (in years), the *size* (measured as the total number of teams a club has), *change in number of teams* over the past three years (declining = -1, growing = 1, equal = 0), presence of a *policy plan* (1 = yes), presence of a *business club* (1 = yes), presence of a *sponsoring commission* (1 = yes) with the corresponding *sponsoring commission member size* and a variable labeled *performance* that captures whether the first team of the club got promoted (= 1), relegated (= -1) or experienced no change in the level at which it played (= 0) over the last three years.

We also controlled for the level of urbanization of the municipality in which the club was located (data available from Statistics Netherlands). Doing so is important because the characteristics of the region a soccer club is located in are likely to have an effect on the amount of attracted sponsor funds. On the one hand, more urbanized regions are generally richer in resources than less urbanized ones which might make it easier for soccer clubs to extract sponsoring funds from their environment. On the other hand, more urbanized regions are also more likely to host other soccer clubs that play at higher levels, including the professional level. Therefore, there might be much more competition for sponsoring funds. To allow for nonlinear effects between the level of urbanization and the sponsoring funds attracted by a firm, the squared term of this control variable was also added.

In Table 2 we present the descriptive statistics for each of the variables discussed in the above, whereas Table 3 contains the bivariate correlation matrix for all variables that we use. Table 2 reveals that all of our variables contain sufficient variation, but also that there are no problematic levels of multicollinearity between the variables. The VIFs are well below the rule-of-thumb threshold level of 10 and there are no problematically high bivariate correlations.

Analysis. The structure of our dependent variable has some implications for the statistical method that can be used to analyze these data. The dependent variable is an ordinal variable that consists of seven categories. Even though these categories represent ordered categories of the amount of attracted sponsoring funds, the unit distance between the different categories does not carry any significance. For this type of data, ordered logit

Table 2 Descriptive Statistics

Variables	Min	Max	Mean	SD	VIF
Funds	1	7	3.37	1.98	n.a.
Age	2	124	70.08	22.68	1.13
Size	3	69	21.29	12.49	1.59
Size—increase	0	1	0.57	0.50	3.15
Size—no change	0	1	0.31	0.46	2.72
Past performance	-1	1	0.12	0.69	1.36
Sponsor commission	0	1	0.84	0.37	2.75
Size of sponsor commission	0	7	2.99	1.88	2.88
Presence of policy plan	0	1	0.65	0.48	1.43
Member of business club	0	1	0.04	0.19	1.11
Urbanization of environment	-1.02	4.92	0.00	1.11	3.83
Urbanization of environment squared	0.00	24.22	1.22	3.58	3.66
Number of sponsor relations	3	215	67.46	41.90	1.98
% of sponsor relations localized	0	100	68.49	25.69	1.25
Duration of sponsor relations	-1.18	2.69	0.00	1.00	1.43
Contact frequency of sponsor relations	1.50	6.25	3.71	1.18	1.47
Tie strength of sponsor relations	1.25	7.00	5.36	0.91	1.50

models are the most suitable methodology (Norušis, 2004).

When fitting an ordinal regression model, it is assumed that the relationships between the independent variables and the logits are the same for all logits. This assumption can be tested with the “test of parallel lines”. Ordinal regression is an appropriate methodology when the value of this test is above 0.10 (Norušis, 2004). The outcome of this test will be reported in the next section and will be used to judge the applicability of the applied method.

Moreover, the distribution of the dependent variable used in this research is skewed to the left (i.e., lower scores are more probable). Therefore, a negative log-log link function between the independent variables and the dependent variable has been used. Instead of the more common logit link function which models the dependent variable as ‘ $\ln(p/1-p)$ ’ where p is the cumulative likelihood of a certain score, a negative log-log link function models the dependent variable as ‘ $-\ln(-\ln(p))$ ’. This specification corrects for the skewed probability distribution of the dependent variable.

Results

Table 4 shows the results of the ordered logit regression models we estimated. Three hierarchically ordered models have been estimated. Model 1 contains only the control variables and sets the baseline against which the other models can be evaluated. Model 2 contains the control variables as well as the measure of the clubs’ quantity of ties. This model has been estimated to establish whether the network of a soccer club, in terms of its number of sponsor relations, has any impact on the

amount of funds it attracts. Finally, model 3, contains all control variables and network embeddedness measures that have been discussed previously. To compare models, Akaike’s Information Criterion (AIC) was calculated for each model. It provides information about the explanatory power of a model relative to the number of parameters that have been used (Sakamoto, 1991). The lower the AIC, the better the fit of the model.

As can be derived from the test of parallel lines of each of the three models, the ordinal regression analyses with the logit link-function is an appropriate way of analyzing these data, because the three corresponding values of this test are well above the threshold level of 0.10. The remaining model statistics give an indication of the extent that the models fit the data. It can be concluded that this is the case for all models, because the models are significant and the pseudo- R^2 values are relatively high.

As can be derived from Table 4, we find support for hypothesis 1 which states that the quantity of ties a soccer club maintains has a positive effect on the amount of attracted funds. We indeed find that more sponsor relations correspond to more funds being attracted.

In hypothesis 2, we posited that the strength of ties maintained by soccer club would have a positive effect on its attraction of sponsoring funds. Our results partly confirm this prediction. For the duration of a tie and for the contact frequency between the soccer club and its sponsor, the expected positive significant coefficient is found. This indicates that more frequent contact and relations with a high level of longevity indeed result in the attraction of more funds. For our measure of tie strength, however, a negative significant effect is found. This measure captures the extent to which the relationship is considered to be fulfilling by the sport club, the strength

Table 3 Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Age	-														
2 Size	0.12	-													
3 Size—increase	-0.12	0.38	-												
4 Size—no change	0.11	-0.30	-0.77	-											
5 Past performance	0.22	0.08	-0.18	0.15	-										
6 Sponsor commission	0.05	0.22	0.24	-0.10	-0.03	-									
7 Size of sponsor commission	0.04	0.36	0.22	-0.14	0.20	0.69	-								
8 Presence of policy plan	0.09	0.26	0.20	-0.15	0.19	0.33	0.40	-							
9 Member of business club	0.07	0.11	0.17	-0.13	-0.04	0.09	0.19	0.04	-						
10 Urbanization of environment	0.05	-0.03	-0.16	0.18	0.07	-0.31	-0.25	-0.06	-0.04	-					
11 Urbanization of environment squared	0.02	-0.12	-0.16	0.23	-0.01	-0.33	-0.28	-0.10	-0.05	0.81	-				
12 Number of sponsor relations	-0.01	0.32	0.31	-0.19	-0.14	0.37	0.24	0.08	0.01	-0.45	-0.32	-			
13 % of sponsor relations localized	0.06	0.28	0.06	-0.12	0.05	-0.04	0.05	0.17	0.07	-0.14	-0.23	0.23	-		
14 Duration of sponsor relations	-0.01	0.01	-0.05	-0.02	-0.18	-0.02	0.09	-0.08	0.00	-0.22	-0.07	0.34	0.03	-	
15 Contact frequency of sponsor relations	0.05	-0.03	0.07	-0.04	-0.03	-0.03	-0.17	0.15	0.01	-0.08	-0.05	0.08	0.07	-0.19	-
16 Tie strength of sponsor relations	0.02	0.05	0.00	-0.06	0.04	-0.15	-0.18	0.10	0.06	-0.19	-0.22	0.14	0.13	0.07	0.43

Table 4 Ordered Logit Estimation Results

	Model 1	Model 2	Model 3
Control variables			
Age	-0.01	-0.01*	-0.01**
Size	0.09***	0.05***	0.06***
Size—increase	-0.52	-0.77	-0.58
Size—no change	-0.80	-0.60	-0.51
Past performance	0.39	-0.03	0.04
Sponsor commission	-0.51	-0.53	-0.96*
Size of sponsor commission	0.45***	0.32***	0.40***
Presence of policy plan	-0.03	0.14	0.09
Member of business club	0.26	0.97*	0.82
Urbanization of environment	0.42**	0.47***	0.49**
Urbanization of environment squared	-0.27***	-0.36**	-0.37**
Quantity of ties			
Number of sponsor relations	-	0.02***	0.01***
Geographical proximity of ties			
% of sponsor relations localized	-	-	0.00
Strength of ties			
Duration of sponsor relations	-	-	0.30*
Contact frequency of sponsor relations	-	-	0.46***
Tie strength of sponsor relations	-	-	-0.41**
Model statistics			
N	107	107	107
Test of parallel lines	0.796	0.211	0.381
-2 LL	327.56	305.12	290.81
Significance	0.000	0.000	0.000
Nagelkerke's Pseudo R-square	50.2%	60.1%	65.5%
AIC	349.56	329.12	322.81

Note. *p < 0.10, **p < 0.05, ***p < 0.01

of the social relation underlying the sponsor relation, and the extent to which the soccer club has positive future expectations about the relationship. That this has a negative impact on the amount of funds attracted is contrary to our hypothesis. Our interpretation of these findings is presented in the next section.

With regard to hypothesis 3, no evidence is found that the level of geographical proximity of a clubs' ties has any effect on the amount of funds attracted by a soccer club. Therefore, hypothesis 3 is rejected.

With regard to the control variables, some noteworthy results are obtained as well. First, bigger soccer clubs attract more funds, whereas older clubs attract slightly fewer funds. More surprising, however, are the findings regarding the changes in the size of the club and its past performance. Promoting to a higher division or relegating to a lower one does not appear to affect the amount of funds attracted as is the case for an increase or a decrease in the amount of teams. This indicates that the amount of funds that is attracted is rather robust to fluctuations in

performance and club size. This is likely to be a particular feature of this relatively low level amateur sport.

With regard to the urbanization of the region a soccer club is located in we find a curvilinear effect in which moderate levels of urbanization correspond to the highest level of fund attraction for soccer clubs. This curvilinear effect implies that very low levels of urbanization may correspond to resource deprivation, making it difficult to attract sponsor funds, while very high levels of urbanization are also detrimental due to the presence of competitors that play at higher levels.

Discussion

This paper aims to improve our understanding about the effect of network embeddedness on sports organizations' commercial performance. Sports organizations compete in a highly uncertain environment and maintaining relations with sponsors is crucial for survival and performance. Despite this relevance, social network theory

and methods have largely been neglected as a research tool within the field of sport management (Daellenbach et al., 2006; Quatman & Chelladurai, 2008). Within this study we tested the effect of the quantity and quality of ties on sport sponsorship. Our findings support the notion that network embeddedness is beneficial by showing that embedded organizations experience significant increases in their commercial performance. In this final section we highlight the key implications of our findings, both for theory and practitioners, discuss the most salient limitations of our work, and identify some avenues for future research.

Implications

Our finding that a higher quantity of sponsor relations implies more attracted funds is in-line with studies in other industries that reported a positive relationship between degree centrality in the interorganizational alliance network and organizational performance (Ahuja, 2000; Baum et al., 2000; Hagedoorn & Schakenraad, 1994). However, as mentioned in the theoretical section, there is a different body of work showing an inverted U-shape relation between the number of ties and organizational performance (e.g., Oerlemans & Knoben, 2010). In these studies it is argued that the downward sloping part of the relation is caused by the fact that the absorptive capacity of the organizations is exceeded and that they can no longer process the inputs from all partners effectively. It is quite likely that we do not find such an inverted U-shape due to the nature of the relations under scrutiny. Sponsor relations do not include the exchange of large degrees of tacit knowledge and therefore do not put a large burden on the cognitive capacities of the partners involved in the relation.

The same explanation might underlie our lack of findings for the importance of the geographical proximity of ties. Given that tacit knowledge exchange is not at the core of these sponsor relations, the importance of face-to-face contacts is diminished as compared with in, for example, R&D relations. Both findings point at the importance of differentiating the theoretical arguments used for different types of relations. Network theory is currently largely based on arguments in which the content of the ties that make up the network is neglected (Borgatti & Foster, 2003). At least one dimension of the content of the ties that should be considered is the extent to which the ties rely on the exchange of (tacit) knowledge versus the exchange of more tangible and/or codified resources.

Practically speaking, our findings indicate that the managers of sport clubs should not limit their search of sponsors to their home region. There is no advantage in doing so in terms of the amount of funds you attract, whereas confining the search to your home region severely limits the amount of potential sponsors. Furthermore, focusing all attention on reeling in a few big sponsors is an inferior strategy as compared with maximizing the number of sponsor relations maintained. We

should acknowledge, however, that this finding is likely to be influenced by the setting of our study, which is relatively low level amateur sport. In such a setting, it is unlikely that a big sponsor is willing to pay a premium for exclusiveness whereas you might find such sponsors in the professional sport context. Nonetheless, this is an important finding for practitioners in the amateur sports.

Our findings with regard to the strength of ties contribute to a long and ongoing debate about the strength of weak (Granovetter, 1973) versus the strength of strong ties (Krackhardt, 1992). Our findings reveal that sport organizations that attract the most sponsorship money are able to: 1) maintain their sponsors for a longer period of time; 2) have a high contact frequency; yet 3) have relatively weak social ties with their main sponsors. The last part of these findings points at the fact that the adage 'the stronger the better' does not hold for sponsorship ties. This unexpected finding might be explained using the concept of over-embeddedness (Uzzi, 1996). For example, in a recent study Kautonen, Zolin, Kuchertz, and Viljamaa (2010) found evidence for "ties that blind" when strong social ties affected the perceived trustworthiness of advisors of small business owners. A similar process might be in place within the sport context as strong social relations with its main sponsors might invoke sport organizations to become overly embedded in these relations. In this process, sport organizations might become satisfied with a sponsorship deal that yields suboptimal funds or they might address too much managerial attention to a limited set of important sponsors whereby they neglect other (potential) sponsors.

However, our findings also revealed that the most beneficial sponsor relations do exhibit characteristics of strong ties, such as high contact frequency and long durations. In other words, the most successful clubs maintain ties that have characteristics of strong (frequent contact, long duration) and weak (social distance) ties. This has two implications for the tie strength debate. First, they reveal an alternative solution to the aforementioned over-embeddedness problem. So far, research has shown that organizations should maintain a mix of strong and weak ties, balancing the benefits of both between relations and thereby preventing becoming over-embedded (Hansen, 1999). However, we show that the balance between the benefits of strong and weak ties can also be struck *within* relations. Second, they indicate that we should not focus on the question whether strong ties are better than weak ties or vice versa, but instead on which dimensions a tie should be strong or weak. In this regard, more fine grained theorizing and empirical research with regard to the qualities of ties is necessary.

Practically, our findings imply that those responsible for maintaining the sponsor relations are walking a tightrope. On the one hand, they should have frequent and long-term contacts with their sponsors. On the other hand, they should be very careful to maintain social distance from their sponsors in the sense that strong social relations between the sport club and the sponsor

are undesirable. This is likely to be quite a difficult feat as frequent and long-term contacts inevitably mean social interactions as well. Moreover, linking this to our findings regarding the quantity of ties implies that clubs should strike this balance for a large number of relations simultaneously.

Limitations

Several limitations apply to the methods of this study. First, we have gathered our relational data only from one of the parties involved in the sponsor relations. This is unlikely to have affected the validity of the quantity of ties and the geographical proximity of ties measurements. However, given that the strength of a relational is to some extent subjective, we cannot exclude that the sponsor would give a different assessment of the strength of the relation than the sport club. However, gathering data from both parties involved was practically infeasible. Given that for the sport organization these relations are of vital interest, whereas they are unlikely to be for the sponsor, we opted to gather data only from them.

Second, our research focused on the ego-networks of the sport clubs. This choice was informed by the fact that ego-networks can be directly influenced by the sport clubs thereby allowing us to link our findings to managerial agency. Nonetheless, there also is a large body of research that shows that a firm's position in the overall network structure has implications for its performance as well (see for an overview: Kilduff & Brass, 2010). On the basis of our ego-network data we cannot determine important network characteristics such as an organization's betweenness centrality or the density of the network.

Finally, we would like to point out that given the cross-sectional and single-context nature of our research, we should be careful when making causal inferences and when generalizing to other sports or professional sports. Some of our findings might reflect correlations instead of causal relations and some findings might be unique to this relatively low-level amateur sport context.

Although our analyses reveal interesting findings with important contributions, these limitations identify the boundary conditions of our results. Moreover, they suggest several fruitful avenues for future research.

Future Research

Given that our research has shown that a network approach is highly fruitful in the sport context, a logical next step would be to apply whole network research in this setting. For example, future studies could also investigate whether structural embeddedness has an effect on sport organizations' commercial performance. Structural embeddedness moves beyond the analysis of a single interorganizational relationship and incorporates the local structures of relations around an organization and the tendency of these organizations to cooperate among

each other (Granovetter, 1992). Within this debate it has been argued that embeddedness in a highly redundant and dense network is beneficial because coordination and communication is improved through repeated exchange with a stable set of partners (Coleman, 1988). Furthermore, these cohesive networks facilitate the development of trust which decreases the likelihood of opportunistic behavior (Williamson, 1981). However, highly redundant and dense ego-networks also decrease the opportunity that firms are able to benefit from information residing in the network, such as new sponsoring opportunities, as this information quickly disseminates to all actors in the network (Burt, 1992). Firms within a nonredundant and less dense network benefit from the opportunity to bridge disconnected parts in the network. The literature on cohesive networks versus sparse networks in relation to performance is rather inconclusive (Ahuja, 2000; Rowley, Behrens, & Krackhardt, 2000) and it would be fruitful to see which of the arguments takes the upper hand in the sport context.

Moreover, there are many more types of relations and types of sports to which the network perspective can be applied. An interesting candidate, especially in the light of whole network research, would be to research player transfer networks. In such networks the opportunity to broker, through the use of a very good scouting and training team, seems particularly large thereby making it a suitable context to test some of the ideas regarding whole network put forward in the above. Moreover, such networks potentially bring together professional and amateur/youth sports as professional clubs continuously search for talented (young) players. The question which clubs are best at identifying, attracting, and profitably selling such talented players is one that can best be answered utilizing a network perspective.

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